

Application No. 10/623,370
SD-7250.1

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AMENDMENTS TO THE CLAIMS

• Please amend the claims as follows:

1. (original) A formulation for use in neutralization of a toxant, said formulation comprising:

at least two solubilizing compounds, wherein at least one solubilizing compound is a cationic surfactant and at least one solubilizing compound is a cationic hydrotrope;

a reactive compound comprising one or more compounds selected from the group consisting of hydrogen peroxide, urea hydrogen peroxide, hydroperoxycarbonate, peracetic acid, sodium perborate, sodium peroxyphosphate, sodium peroxydisulfate, and sodium percarbonate;

a bleaching activator selected from the group consisting of O-acetyl, N-acetyl, and nitrile group bleaching activators; and

a sorbent additive;

wherein said at least two solubilizing compounds, said reactive compound, said bleaching activator, and said sorbent additive, when mixed with water and exposed to the toxant, neutralizes the toxant.

2. (previously presented) The formulation according to claim 1, wherein said cationic surfactant comprises a quaternary ammonium salt selected from the group consisting of cetyltrimethyl ammonium bromide, benzalkonium chloride, benzethonium chloride, cetylpyridinium chloride, alkyldimethylbenzylammonium salt, tetrabutyl ammonium bromide, and a mixture of benzyl (C12-C16) alkyldimethylammonium chlorides, and combinations thereof.

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3. (previously presented) The formulation according to claim 1, further comprising a water-soluble polymer selected from the group consisting of polyvinyl alcohol, guar gum, (cationic or non-ionic) polydiallyl dimethyl ammonium chloride, polyacrylamide, poly (ethylene oxide), glycerol, polyethylene glycol 8000 (PEG 8000), and guar gum 2-hydroxypropyl ether, and combinations thereof.
4. (Original) The formulation according to claim 1, further comprising a fatty alcohol comprising from 8 to 20 carbon atoms per molecule.
5. (Original) The formulation according to claim 1, further comprising a solvent selected from the group consisting of Di(propylene glycol) methyl ether, diethylene glycol monobutyl ether, and combinations thereof.
6. (previously presented) The formulation according to claim 1, further comprising a carbonate or bicarbonate salt selected from the group consisting of potassium bicarbonate, sodium bicarbonate, ammonium bicarbonate, ammonium hydrogen bicarbonate, lithium bicarbonate, ammonium carbonate, and potassium carbonate, and combinations thereof.
7. (previously presented) The formulation according to claim 1, wherein said bleaching activator comprises one or more water-soluble bleaching activators selected from the group consisting of acetylcholine chloride, 4-cyanobenzoic acid, ethylene glycol diacetate, propylene glycol monomethyl ether acetate, methyl acetate, dimethyl glutarate, diethylene glycol monoethyl ether acetate, glycerol diacetate (Diacetin), glycerol monoacetate, glycerol triacetate, and propylene glycol diacetate, and combinations thereof.

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8. (Original) The formulation according to claim 1, wherein said bleaching activator comprises one or more water-insoluble bleaching activators selected from the group consisting of tetraacetyl ethylenediamine (TAED), n-nonanoyloxybenzenesulfonate (NOBS), and N-acetyl glucosamine, and combinations thereof.

9. (previously presented) The formulation according to claim 1 consisting essentially of:

1-10% benzalkonium chloride;

1-8% propylene glycol diacetate or glycerol diacetate;

1-16% hydrogen peroxide;

2-8% potassium bicarbonate;

a sufficient amount of sorbent additive, such that a freely flowing powder results when the sufficient amount of sorbent additive is mixed with the 1-8% propylene glycol diacetate or glycerol diacetate; and
balance water.

10. (Original) The formulation of claim 1, wherein said sorbent additive comprises one or more compounds selected from the group consisting of sodium hexa meta phosphate, sodium ortho phosphate, sodium mono hydrogen ortho phosphate, sodium acid pyro phosphate, sodium tri-polyphosphate, sodium sulfate, sodium carbonate, sodium bicarbonate, calcium meta phosphate, calcium hypo chlorite, calcium chloride, calcium carbonate, potassium bicarbonate, potassium bromide, potassium carbonate, zeolytes, precipitated silicas, percarbonates, sodium citrate, dendritic salt (sea salt), citric acid, potassium bromide, polyethylene glycols, PEG 8000, urea, and polyols, and combinations thereof.

11. (previously presented) The formulation of claim 1, wherein said sorbent additive comprises one or more polyol compounds selected from the group consisting of sorbitol, mannitol, hydrogenated starch hydrolysates, maltitol, zylitol, lactitol monohydrate, anhydrous isomalt, erythritol, and polydextrose, and combinations thereof.

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12-16. (CANCELLED)

17. (CURRENTLY AMENDED) A formulation for use in neutralization of a toxant, said formulation comprising:

- a cationic surfactant;
 - a reactive compound comprising one or more compounds selected from the group consisting of hydrogen peroxide, urea hydrogen peroxide, hydroperoxycarbonate, peracetic acid, sodium perborate, sodium peroxyphosphate, sodium peroxysilicate, and sodium percarbonate;
 - a bleaching activator selected from the group consisting of O-acetyl, N-acetyl, and nitrile group bleaching activators;
 - a sorbent additive selected from the group consisting of calcium hypochlorite, calcium chloride, ~~sodium citrate~~, dendritic salt, polyols, urea, and potassium bromide, and combinations thereof; and
 - a carbonate or bicarbonate salt, not one of the reactive compounds;
- wherein said cationic surfactant, said reactive compound, said bleaching activator, said sorbent additive, and said carbonate or bicarbonate salt, when mixed with water and exposed to the toxant, neutralizes the toxant.

18. (Original) The formulation according to claim 17, wherein said cationic surfactant comprises a quaternary ammonium salt comprising benzalkonium chloride.

19. (previously presented) The formulation according to claim 17, wherein said carbonate or bicarbonate salt comprises one or more compounds selected from the group consisting potassium bicarbonate, sodium bicarbonate, ammonium bicarbonate, ammonium hydrogen bicarbonate, lithium bicarbonate, ammonium carbonate, and potassium carbonate, and combinations thereof.

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20. (previously presented) The formulation according to claim 17 consisting essentially of said cationic surfactant, said reactive compound, said bleaching activator, said sorbent additive, said carbonate or bicarbonate salt, and water.

21. (CURRENTLY AMENDED) ~~The formulation according to claim 17~~ A formulation for use in neutralization of a toxant, said formulation comprising:

a cationic surfactant;

a reactive compound comprising one or more compounds selected from the group consisting of hydrogen peroxide, urea hydrogen peroxide, hydroperoxycarbonate, peracetic acid, sodium perborate, sodium peroxyphosphate, sodium peroxysilicate, and sodium percarbonate;

a bleaching activator selected from the group consisting of O-acetyl, N-acetyl, and nitrile group bleaching activators;

a sorbent additive selected from the group consisting of calcium hypochlorite, calcium chloride, sodium citrate, dendritic salt, polyols, urea, and potassium bromide, and combinations thereof; and

a carbonate or bicarbonate salt, not one of the reactive compounds;

wherein said cationic surfactant, said reactive compound, said restriction bleaching activator, said sorbent additive, and said carbonate or bicarbonate salt, when mixed with water and exposed to the toxant, neutralizes the toxant; and

wherein said bleaching activator comprises one or more water-soluble bleaching activators selected from the group consisting of acetylcholine chloride, 4-cyanobenzoic acid, ethylene glycol diacetate, propylene glycol monomethyl ether acetate, methyl acetate, dimethyl glutarate, diethylene glycol monoethyl ether acetate, glycerol diacetate (Diacetin), glycerol monoacetate, glycerol triacetate, and propylene glycol diacetate, and combinations thereof.

22-25. (CANCELLED)

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26. (CURRENTLY AMENDED) ~~The formulation according to claim 17~~ A formulation for use in neutralization of a toxant, said formulation comprising:

a cationic surfactant;

a reactive compound comprising one or more compounds selected from the group consisting of hydrogen peroxide, urea hydrogen peroxide, hydroperoxycarbonate, peracetic acid, sodium perborate, sodium peroxyphosphate, sodium peroxydicarbonate, and sodium percarbonate;

a bleaching activator selected from the group consisting of O-acetyl, N-acetyl, and nitrile group bleaching activators;

a sorbent additive selected from the group consisting of calcium hypochlorite, calcium chloride, sodium citrate, dendritic salt, polyols, urea, and potassium bromide, and combinations thereof; and

a carbonate or bicarbonate salt, not one of the reactive compounds;

wherein said cationic surfactant, said reactive compound, said bleaching activator, said sorbent additive, and said carbonate or bicarbonate salt, when mixed with water and exposed to the toxant, neutralizes the toxant; and

wherein said sorbent additive comprises one or more polyol compounds selected from the group consisting of sorbitol, mannitol, hydrogenated starch hydrolysates, maltitol, zylitol, lactitol monohydrate, anhydrous isomalt, erythritol, and polydextrose, and combinations thereof.

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27. (CURRENTLY AMENDED) A formulation for use in neutralization of a toxant, said formulation comprising:

a cationic surfactant;

a reactive compound comprising one or more compounds selected from the group consisting of hydrogen peroxide, urea hydrogen peroxide, hydroperoxycarbonate, peracetic acid, sodium perborate, sodium peroxyphosphate, sodium peroxydicarbonate, and sodium percarbonate;

a sorbent additive ; and

a water-soluble bleaching activator selected from the group consisting of acetylcholine chloride, 4-cyanobenzoic acid, ethylene glycol diacetate, propylene glycol monomethyl ether acetate, methyl acetate, dimethyl glutarate, diethylene glycol monoethyl ether acetate, glycerol diacetate (Diacetin), glycerol monoacetate, glycerol triacetate, and propylene glycol diacetate, and combinations thereof;

wherein said cationic surfactant, said reactive compound, said sorbent additive, and said water-soluble bleaching activator, when mixed with water and exposed to the toxant, neutralizes the toxant; and

wherein said sorbent additive comprises one or more compounds selected from the group consisting of sodium sulfate, calcium hypochlorite, calcium chloride, potassium bromide, potassium carbonate, zeolytes, precipitated silicas, percarbonates, dendritic salt (sea salt), potassium bromide, urea, and polyols, and combinations thereof.

28. (CANCELLED)

29. (Original) The formulation according to claim 27, wherein said cationic surfactant comprises a quaternary ammonium salt comprising benzalkonium chloride.

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30. (previously presented) The formulation according to claim 27, further comprising one or more carbonate or bicarbonate salts selected from the group consisting potassium bicarbonate, sodium bicarbonate, ammonium bicarbonate, ammonium hydrogen bicarbonate, lithium bicarbonate, ammonium carbonate, and potassium carbonate, and combinations thereof.

31. (previously presented) The formulation according to claim 27, consisting essentially of said cationic surfactant, said reactive compound, said water-soluble bleaching activator, said sorbent additive, and water.

32-33. (CANCELLED)

34. (CURRENTLY AMENDED) ~~The formulation of claim 27, A formulation for use in neutralization of a toxant, said formulation comprising:~~

a cationic surfactant;

a reactive compound comprising one or more compounds selected from the group consisting of hydrogen peroxide, urea hydrogen peroxide, hydroperoxycarbonate, peracetic acid, sodium perborate, sodium peroxyphosphate, sodium peroxysilicate, and sodium percarbonate;

a sorbent additive ; and

a water-soluble bleaching activator selected from the group consisting of acetylcholine chloride, 4-cyanobenzoic acid, ethylene glycol diacetate, propylene glycol monomethyl ether acetate, methyl acetate, dimethyl glutarate, diethylene glycol monoethyl ether acetate, glycerol diacetate (Diacetin), glycerol monoacetate, glycerol triacetate, and propylene glycol diacetate, and combinations thereof;

wherein said cationic surfactant, said reactive compound, said sorbent additive, and said water-soluble bleaching activator, when mixed with water and exposed to the toxant, neutralizes the toxant; and

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wherein said sorbent additive comprises one or more polyol compounds selected from the group consisting of sorbitol, mannitol, hydrogenated starch hydrolysates, maltitol, zylitol, lactitol monohydrate, anhydrous isomalt, erythritol, and polydextrose, and combinations thereof.

35. (ORIGINAL) A formulation for use in neutralization of a toxant, said formulation comprising:

at least one solubilizing compound, selected from the group consisting of a cationic hydrotrope and a fatty alcohol comprising from 8 to 20 carbon atoms per molecule;

a reactive compound comprising one or more compounds selected from the group consisting of hydrogen peroxide, urea hydrogen peroxide, hydroperoxycarbonate, peracetic acid, sodium perborate, sodium peroxyphosphate, sodium peroxysilicate, and sodium percarbonate;

a sorbent additive; and

a bleaching activator selected from the group consisting of O-acetyl, N-acetyl, and nitrile group bleaching activators;

wherein said at least one solubilizing compound, said reactive compound, said sorbent additive, and said bleaching activator, when mixed with water and exposed to the toxant, neutralizes the toxant.

36. (CANCELLED)

37. (previously presented) The formulation of claim 35, wherein said sorbent additive comprises one or more compounds selected from the group consisting of sodium hexa meta phosphate, sodium ortho phosphate, sodium mono hydrogen ortho phosphate, sodium acid pyro phosphate, sodium tri-polyphosphate, sodium sulfate, sodium carbonate, sodium bicarbonate, calcium meta phosphate, calcium hypochlorite, calcium chloride, calcium carbonate, potassium bicarbonate, potassium bromide, potassium carbonate, zeolites, precipitated silicas, percarbonates, sodium citrate, dendritic salt

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(sea salt), citric acid, potassium bromide, polyethylene glycols, PEG 8000, urea, and polyols, and combinations thereof.

38. (previously presented) The formulation of claim 35, wherein said sorbent additive comprises one or more polyol compounds selected from the group consisting of sorbitol, mannitol, hydrogenated starch hydrolysates, maltitol, zylitol, lactitol monohydrate, anhydrous isomalt, erythritol, and polydextrose, and combinations thereof.

39. (NEW) A formulation for use in neutralization of a toxant, said formulation comprising:

a cationic surfactant;

a reactive compound comprising one or more compounds selected from the group consisting of hydrogen peroxide, urea hydrogen peroxide, hydroperoxycarbonate, peracetic acid, sodium perborate, sodium peroxyphosphate, sodium peroxydisulfate, and sodium percarbonate;

a bleaching activator selected from the group consisting of O-acetyl, N-acetyl, and nitrile group bleaching activators; and

a sorbent additive comprising a sugar alcohol;

wherein said cationic surfactant, said reactive compound, said bleaching activator, said sorbent additive, and said carbonate or bicarbonate salt, when mixed with water and exposed to the toxant, neutralizes the toxant.

40. (NEW) The formulation of claim 39, wherein the sorbent additive is sorbitol.

41. (NEW) The formulation of claim 39, wherein the bleaching activator is propylene glycol diacetate or glycerol diacetate.

42. (NEW) The formulation of claim 39, wherein the sorbent additive is sorbitol; and the bleaching activator is propylene glycol diacetate or glycerol diacetate.